

23 stand rejected under §§102(a) and 102(e) as being anticipated by *Yoshida*; and claim 15 stands rejected under §103(a) as being unpatentable over *Yoshida* in view of *Talbot et al.* (U.S. Pat. No. 6,019,249) and *Steffan et al.* (U.S. Pat. No. 6,200,823).

Applicant respectfully traverses the §112(2) rejection of claims 1, 16 and 20 as the claims distinctly point out the subject matter of the invention. At page 2, the Office Action incorrectly states that "BOX and SOI are both insulators." As well known and indicated in claim 1, "SOI" (silicon on insulator) refers to silicon material being located in a SOI structure ("SOI" is a term of art characterizing a type of IC structure). "BOX" refers to a buried oxide layer and, while it can be used to refer to a type of insulator (*i.e.*, oxide insulator) in an SOI structure, this term (BOX) does not necessarily connote an SOI structure since it may also be used in a non-SOI structure. Applicant submits that these terms are sufficiently particular and well known that all requirements of §112(2) are satisfied. With respect to the Office Action's assertion that these terms are not sufficiently cooperative elements, Applicant fails to recognize how claim 1 would present an issue since "BOX" is not used in either claim 1 or claim 16. With respect to claim 20, since this term has been canceled, there should be no further issue. Applicant requests that the rejection be removed.

Applicant respectfully traverses all of the §102 rejections as the Office Action fails to present a reference that completely corresponds to Applicant's invention. Applicant's invention includes exposing a region of the insulator and inducing a detectable response from that exposed region of insulator, as claimed. The '295 reference teaches removing the insulator layer thereby failing to teach inducing a detectable response from the exposed region of insulator as claimed by Applicant. Each of the independent claims, 1, 16, and 17 include such limitations and therefore, each of the §102 rejections should be withdrawn.

This point is readily recognized by comparing claim 1 of Applicant's specification to the cited teaching of the '295 reference. Claim 1 of Applicant's specification includes, among other aspects, "exposing a region of the insulator of the SOI structure where the substrate has been removed; and inducing a detectable response from the exposed region [of the insulator]." The Office Action cites the Figure 5 discussion of the '295 reference (at column 6) wherein the reference explains that "a potential contrast image can be easily viewed . . . because no secondary electrons are accumulated in an insulating layer 1c"

(Column 6, lines 52-55). No secondary electrons are accumulated in the insulating layer 1c because the insulating layer 1c is no longer there: "the insulating layer 1c is removed" (Column 6, lines 58-59). Thus, because the insulating layer 1c is no longer there, the assertion that that the '295 reference teaches "inducing a detectable response from the exposed region [of the insulator]" is misplaced.

With respect to the rejection of claim 3, the Office Action fails to cite a reference that teaches or suggests all of Applicant's claimed limitations. For example, claim 3 includes, "analyzing the die includes using a scanning electron microscope (SEM)." The '295 reference fails to teach all of the limitations of Applicant's claim 3 and the Office Action does not attempt to show complete correspondence with the '295 reference. Without complete correspondence, a §102 rejection cannot stand. With respect to the assertion of Official Notice, while applicant appreciates the Examiner's effort to corroborate the assertion, such Official Notice appears to be irrelevant to the §102 rejection which requires complete correspondence to the claimed invention -- without requiring any outside reference; in this instance, the Official Notice is an outside reference. Moreover, Applicant submits that the skilled artisan would not be motivated to modify the cited teaching (were this position to be advanced by the Examiner).

Further, with respect to claims 9 and 10, the Office Action fails to cite a reference that teaches or suggests all of Applicant's claimed limitations. Each of the claims includes using buried oxide (BOX) in the SOI structure. The '295 reference does not specify that the insulating layer 1c is a buried oxide; therefore, the '295 reference fails to completely correspond to the claimed invention and the §102 rejection must fail.

With respect to the rejection of claim 13, the Office Action states that "whether or not to stimulate a response by using the DUT board 12, until a failure is induced in the die, is a mere matter of deliberate choice." Claim 13 is not directed to either the use of a DUT board or stimulating a response until failure is induced in the die. As such, no correspondence has been shown in the Office Action between the '295 reference and claim 13, and Applicant requests that the rejection be withdrawn.

Applicant respectfully traverses the §103 rejection of claim 15 as the Office Action fails to present a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, the Office Action must present a teaching of prior art references so as to

provide complete correspondence to the claimed invention and evidence of motivation for combining the prior art references as asserted. The Office Action fails to meet each of the requirements. As discussed above, the '295 reference fails to completely correspond to Applicant's claimed invention for failing to teach inducing a detectable response from the exposed region of insulator. As such, the combined references, relying primarily on the '295 reference fail to teach all of the claimed limitations.

Moreover, the Office Action fails to present evidence of motivation in support of the modification of the cited '295 reference. Recent case law indicates that evidence of motivation must be specifically identified and shown by some objective teaching in the prior art leading to the modification. "Our court has provided [that the] motivation to combine may be found explicitly or implicitly: 1) in the *prior art references* themselves; 2) in the knowledge of those of ordinary skill in the art that certain *references*, or disclosures in those references, are of special interest or importance in the field; or 3) from the nature of the problem to be solved, 'leading inventors to look to *references* relating to possible solutions to that problem.'" Ruiz v. A.B. Chance Co., 234 F.3d 654, 57 U.S.P.Q.2d 1161 (Fed. Cir. 2000). The Office Action fails to identify any evidence of factual teachings, suggestions or incentives from the '295 reference for why one skilled in the art would be led to modify the '295 reference.

Moreover, the '295 reference plainly teaches various methods for detecting defects without using a non-defective die; indeed, these various methods are recited as specific "objects" of the invention. *See, e.g.*, column 3, lines 38-55. As provided by long-standing case law, where the proposed modification to the main prior art reference would undermine the purpose or "object" of the invention, the main prior art reference teaches away. *See, In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) (a §103 rejection cannot be maintained when the asserted modification undermines purpose of main reference). Applicant requests that the §103 rejection be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any

remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

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